An Autonomous Institution -Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ & CGPA 3.51 by NAAC



LESSON PLAN 2023-2024

DEPARTMENT OF MATHEMATICS

(UG - Odd Semester)



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution -Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A+ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

I - B.SC MATHEMATICS LESSON PLAN 2023-2024

Sub. Code: 23OUMA11

Title of the Paper: Algebra & Trigonometry

Total Hours: 75 Stream: Regular

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Reciprocal Equations-Standard form— Increasing or decreasing the roots of a given equation- Removal of terms, Approximate solutions of roots of polynomials by Horner's method— related problems.	15	Chalk & Talk	R.R. Silveya
August	п	Summation of Series: Binomial— Exponential —Logarithmic series (Theorems without proof) — Approximations- related problems.	15	Chalk & Talk	R.R. Enhuye
Sep	ш	Characteristic equation – Eigen values and Eigen Vectors-Similar matrices - Cayley – Hamilton Theorem (Statement only) - Finding powers of square matrix, Inverse of a square matrix up to order 3, Diagonalization of square matrices- related problems.		Chalk & Talk	P.R-buhuya
Oct	IV	Expansions of $sin\theta$, $cos\theta$ in powers of $sin\theta$, $cos\theta$ -Expansion of $tan\theta$ in terms of $tan\theta$, Expansions of $cos^n\theta$, $sin^n\theta$, $cos^m\theta$ $sin^n\theta$ -Expansions of $tan(\theta_1+\theta_2++\theta_n)$ - Expansions of $tan(\theta_1+\theta_2++\theta_n)$ - Expansions of $tan(\theta_1+\theta_2++\theta_n)$ - Expansions of $tan(\theta_1+\theta_2++\theta_n)$ - replaces	15	Chalk & Tall	R. R. huhuey
Nov	v	problems. Hyperbolic functions – Relation between circular and hyperbolic functions Inverse hyperbolic functions Logarithm of complex quantities related problems.	5, 15	Chalk & Tal	k R.R. Silver

Signature of the HOD

Signature of the Principal

PRINCIPALI/C E.M.G. YADAVA WOMEN'S COLLEGE MADURAI-625 014

Marian



An Autonomous Institution –Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC
DEPARTMENT OF MATHEMATICS

I - B.Sc., Mathematics

LESSON PLAN 2023-2024

Sub. Code: 23OUMA12

Title of the Paper: Differential Calculus

Total Hours: 60

STREAM - Regular.

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Successive Differentiation: The derivative—Standard results—Fractional expressions—Trigonometrical transformation—Formation of equations involving derivatives—Leibnitz formula for the nth derivative of a product	12	Chalk & Talk	p.r.p.
July	п	Partial Differentiation: Partial derivatives— Successive partial derivatives—Function of a function rule— Total differential coefficient— A special case — Implicit Functions.	12	Chalk & Talk	p.r.e.
Aug	ш	Partial Differentiation (Continued): Homogeneous functions—Partial derivatives of a function of two variables – Maxima and Minima of functions of two variables - Lagrange's method of undetermined multipliers	12	Chalk & Talk	prie.
Sep	IV	Envelope: Method of finding the envelope – Another definition of envelope–	12	Chalk & Talk	prie

		Envelope of family of curves which are quadratic in the parameter.			
Oct	v	Curvature: Definition of Curvature - Circle, Radius and Centre of Curvature - Evolutes and Involutes - Radius of Curvature in Polar Co- ordinates.	12	Chalk & Talk	p.r.o.

Signature of the HOD

e of the Principal

PRINCIPAL I/C EM.G. YADAVA WOMEN'S COLLEGE

MADURAI-625 014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

I-B.Sc., Mathematics - Regular LESSON PLAN 2023-2024

Sub. Code: 23OUMASECN1

Title of the Paper: Mathematics for Competitive Examinations-I

Total Hours:30

Month	Unit	Description Of The Syllabus	Hours Allocate d	Teaching Mode & Methods	Course Teacher Signature
July	I	Numbers and Simplifications	6	Chalk & Talk	Selvi
August	п	Square roots and cube roots	6	Chalk & Talk	selvi
Sep	ш	Average & Problems on Numbers	6	Chalk & Talk	selvi
Oct	IV	Problems on Ages	6	Chalk & Talk	Selvi
Nov	v	Percentage, Profit and Loss	6	Chalk & Talk	selvi

Signature of the HOD

Signature of the Principal

PRINCIPAL I/C
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014

William



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

DEPARTMENT OF MATHEMATICS

I-B.Sc., Mathematics - Regular LESSON PLAN 2023-2024

Sub. Code: 23OUMAFC1

Title of the Paper: Foundation Course- Bridge Mathematics

Total Hours: 30

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	1	Algebra: Binomial theorem, General term, middle term, problems based on these concepts	6	Chalk & Talk	P. futt.
August	п	Sequences and series (Progressions). Fundamental principle of counting. Factorial n.	6	Chalk & Talk	P. futt.
Sep	ш	Permutations and combinations, Derivation of formulae and theirconnections, simpleapplications, c ombinations with repetitions, arrangements within groups, formation of groups.	6	Chalk & Talk	R. Knath.
Oct	IV	Trigonometry: Introduction to trigonometric ratios, proof of sin(A+B), cos(A+B), tan(A+B) formulae, multiple and sub multiple angles, sin(2A), cos(2A), tan(2A) etc., transformations sum into product and product into sum formulae, inverse trigonometric functions, sine ruleand cosine rule.	6	Chalk & Talk	P. K. ta.
Nov	v	Calculus: Limits, standard formulae and problems, differentiation first principle, uv rule, u/v rule, methods of differentiation, application of derivatives, integration- product rule and substitution method.	6	Chalk & Talk	R frath

Pred.

Signature of the HOD

Signature of the Principal
PRINCIPAL I/C
EM.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014

An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

II - B.Sc., Mathematics - Regular LESSON PLAN

2023-2024

Sub. Code: 22OUMA31

Title of the Paper: Modern Algebra Total Hours: 90

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Groups: Definition and Examples - Elementary properties of groups— Equivalent definitions of a group — Permutation Groups-Subgroups.	18	Chalk & Talk	N. Hema
August	п	Cyclic groups – Order of an Element-Cosets and Lagrange's Theorem-Normal Subgroups and Quotient Groups	18	Chalk & Talk	N. Hema
Sep	ш	Isomorphism, Homomorphism – Rings: Definitions and Examples - Elementary properties of rings.	18	Chalk & Talk	N. Heme
Oct	· IV	Isomorphism - Types of Rings - Characteristic of a ring -Subrings	18	Chalk & Talk	w. Hem
Nov	v	Ideals-Quotient rings- Maximal and prime ideals	18	Chalk & Talk	or been

by .

Signature of the HOD

Signature of the Principal PRINCIPAL I

E.M.G. YADAVA WOMEN'S COLLEGE MADURAI-625 014

die



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

EPARTMENT OF MATHEMATICS

LESSON PLAN 2023-2024

Sub. Code: 22OUMADSE3A

Title of the Paper: Operations Research

Total Hours: 75 Stream: Regular

Stream: Regular		Hours Teaching		Course Teacher	
Month	Unit	Description Of The Syllabus	Hours Allocated	Mode & Methods	Signature
July	1	Linear programming problem (LPP): Introduction-Mathematical formulation of the Linear Programming problem - Graphical solution method - Some exceptional cases-General linear programming problem-Canonical & standard form of LPP	15	Chalk & Talk	R. R. anberry
August	п	LPP Simplex Method: Introduction- Fundamental properties of solutions -The computational procedure - Use of Artificial Variable	15	Chalk & Talk	R.P. Library
Sep	ш	Duality in LPP: Introduction- General primal —Dual pair- Formulating a dual problem- Primal dual pair in matrix form —Duality and simplex method—Dual simplex method(problems only)	15	Chalk & Talk	R.R. Luhu
Oct	IV	Assignment Problem: Introduction-LP formulation of the Transportation Problem - Solution of a transportation problem - Finding an initia basic feasible solution - Tes	n n n n n n n n n n n n n n n n n n n	Chalk & Tall	R. R. Enhu

Nov	v	Games and strategies: Two- person zero-sum games — Some basic terms — The Maxmini — Minimax Principle - Games without saddle points- Mixed Strategies — Graphic Solution of 2xn and mx2 games — Dominance Property	15	Chalk & Talk	R.R. Lilinga
-----	---	--	----	--------------	--------------

PRINCIPALI/C E.M.G. YADAVA WOMEN'S COLLEGE MADURAI-625 014



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

DEPARTMENT OF MATHEMATICS

II - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 22OUMASE3

Title of the Paper: Application of Calculus

Stream: Regular

Total Hours: 75

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Maxima and Minima-Concavity and convexity, Point of inflexion-indetermined forms.	6	Chalk & Talk	shi
Aug	п	Tangent and Normal – Angle of intersection of curves-singular points	6	Chalk & Talk	Afri
Sep	ш	Linear Asymptotes- Asymptotes parallel to the axes- Another method for find asymptotes-asymptotes by inspection intersection of a curve with its asymptotes.	6	Chalk & Talk	Py
Oct	IV	Tracing a curves- Cartesian equation and polar equation(except well known curves)	6	Chalk & Talk	Chy
Nov	v	Area of plane region and length of a plane curve	6	Chalk & Talk	Shipi

Prit

Signature of the HOD

Signature of the Principal

PRINCIPAL I/C
EM.G. YADAVA WOMEN'S COLLEGE

MADURAI-625 014

7



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution -Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A+ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III - B.SC MATHEMATICS

LESSON PLAN 2023-2024

Sub. Code : 21M51

Title of the Paper: Modern Analysis

Total Hours: 75

	Stream	am: Regular	Hours	Teaching Mode	Course Teacher Signature
Month	Unit	Description Of The Syllabus	Allocated	& Methods	Course Teacher Signature
July	I	Countable Sets - Uncountable Sets - Inequalities of Holder and Minkowski - Metric Spaces - Definitions and - Open Ball in a Metric Dense Sets - Complete Metric Spaces- Completeness - Baire's Category Theorem.	15	Chalk & Talk	R.R. Sihneye
August	п	Continuity - Continuity - Homeomorphism - Uniform Continuity.Countable Sets - Uncountable Sets - Inequalities of Holder and Minkowski - Open Ball in a Metric Space - Open Sets - Subspace - Interior of a set	15	Chalk & Talk	R. P. Lihuje
Sep	ш	Complete Spaces- Completeness - Baire's Category Theorem.	15	Chalk & Talk	R. R. Shruge
Oct	IV	Connectedness - Definition and Examples - Connected Subsets of R - Connectedness and Continuity	15	Chalk & Talk	R. R. Subernye
Nov	v	Connectedness - Definition and Examples - Connected Subsets of R - Connectedness and Continuity	15	Chalk & Talk	R. F. Subwys

P. NEP.

Signature of the HOD

PRINCIPAL I/C EM.G. YADAVA WOMEN'S COLLEGE MADURAI-625 014

tille

E.J.

E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE

An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III- B.Sc., Mathematics - Regulari LESSON PLAN 2023-2024

Sub. Code: 21M52

Title of the Paper: Statistics -I

Total Hours: 75

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	1	Moments, Skewness and Kurtosis: Moments – Skewness and Kurtosis – Curve Fitting – Principle of least squares	15	Chalk & Talk	Pin
August	п	Correlation and Regression: Correlation – Rank Correlation – Regression – Correlation Co- Efficient for a Bivariate Frequency Distribution.	15	Chalk & Talk	prip.
Sep	ш	Theory of Attributes: Attributes- Consistency of data – Independence and Association of data.	15	Chalk & Talk	P.L.P.
Oct	IV	Index Number: Index Numbers – Consumer Price Index Number (cost of living index numbers).	15	Chalk & Talk	prie.
Nov	v	Probability: Probability – Conditional Probability.	15	Chalk & Talk	plip.

P. Not

Signature of the HOD

Signature of the Principal
PRINCIPAL I/C
EM.G. YADAVA WOMEN'S COLLEGE
MADURAL-825 014

An Autonomous Institution – Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A+ and CGPA 3.51 by NAAC

DEPARTMENT OF MATHEMATICS

III-B.Sc., Mathematics – Regularia

LESSON PLAN

2023-2024

Sub. Code: 21M53

Title of the Paper: Dynamics

Total Hours: 60

Mont h	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	Ι	. Definitions – Two fundamental principles – Path of a Projectile is a parabola – Characteristics of the motion of a projectile - To determine when the horizontal range of a projectile is maximum, given the magnitude u of the velocity of projection – To show that, for a given initial velocity of projection there are, in general to possible directions of projections so as to obtain a given horizontal range (with examples)	tonibuli sali calordia calordia di metrojo ch stdizece toje 12 i en to co branci	Chalk & Talk	R.Mu
Augus	п	To find the velocity of the projectile in magnitude and direction at the end of time t – To show that, The velocity at any point p of a projectile is equal in magnitude to the velocity acquire in falling freely from the directrix to	12	Chalk & Talk	J.M.

		the point – Given the magnitude of		THE POP	
		the velocity of projection, to show		and the	
	11 3	that there are two direction of	A CONTRACTOR		
		projection for the particle so as to			
		reach a given point - Range on an			
		inclined plane - To find, The			
		greatest distance of the projectile			
		from the inclined plane and show			
	-	that is attained in the half the total	1117	ile mag	
		time of flight – To determine when	+	-,-,-	
		the range on the inclined plane is	11, 00.05	a - 411 1564 5	
		maximum, given the magnitude u	TAMES ES	- 154 400	p.M
		of the velocity of projection – To		1112,714	*
		show that, For a given initial	- 11-21-4	CALL SPACE OF	
		velocity of projection, there are, in	**************************************	April A Ser	
		general, two possible directions of		sade on and	
		projection so as to obtain a given		- Mariel	
		range on an inclined plane –	100	1143	L · Jai
		Motion on the surface of a smooth	i difuktiye		
		inclined plane.(with examples)	el vicina		
		memora piano.(with examples)			
Sep		Collision of Elastic Bodies –			
		Definitions – Fundamental laws of		2 81 5	
		impact – Impact on the smooth sphere on a fixed smooth plane –			
		Direct impact of two smooth			/
	ш	spheres - Laws of kinetic energy	12	Chalk & Talk	R.Me
		due to direct impact of two smooth	Andreas district	Taik	
		spheres – Oblique impact of two smooth spheres – Laws of kinetic	Later 1		
		energy due to oblique impact of	ppylate?	Leftler I	
		two smooth sphere.(with examples)		er de la	
Oct	IV	Simple Harmonic Motions -	12	Chalk &	
		Simple Harmonic Motion in a	12	Talk	

		Straight line – General solution of S.H.M Equation – Geometrical Representation of a Simple Harmonic Motion – Change of origin - Composition of two Simple Harmonic Motion of the same period and in same straight line – Composition of two Simple Harmonic Motion of the same period in two perpendicular directions.(with examples)			R.M.
Nov	v	Motion Under The Action Of Central Forces – Velocity and Acceleration in Polar Co-ordinates – Equation of Motion in Polar Coordinates – Note on the equiangular spiral – Differential Equation of central orbits – Perpendicular from the pole on the tangent formulae in polar coordinates – Pedal equation of the central orbit. (with examples)	12	Chalk & Talk	P.phe,

Signature of the HOD

PRINCIPAL I/C
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III - B.Sc., Mathematics - Regular . LESSON PLAN

2023-2024

Sub. Code: 21ME5A

Title of the Paper: Linear Algebra

Total Hours: 60

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Vector Spaces: Definition and Examples – Subspaces – Linear Transformations.	12	Chalk & Talk	prif.
July	п	Vector Spaces: Span of a set - Linear Independence – Basis and Dimension – Rank and Nullity – Matrix of a Linear Transformation.	12	Chalk & Talk	prip.
Aug	ш	Inner Product Space: Definition and Examples – Orthogonality – Orthogonal Complement.	12	Chalk & Talk	prof.
Sep	IV	Theory of Matrices: Algebra of Matrices – Types of Matrices – The Inverse of Matrix.	12	Chalk & Talk	R. R. Arhu
Oct	v	Theory of Matrices: Elementary Transformations Ranks of a Matrix — Simultaneous Linear Equations — Characteristic Equation and Cayley Hamilton Theorem — Eigen Values and Eigen Vectors.	12	Chalk & Talk	R. R. Arbu

p.rsf

Signature of the HOD

Signature of the Principal

PRINCIPAL I/C

E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014

When



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 21AA51

Title of the Paper: Programming in C

Stream: Regular

Total Hours: 60

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Overview of C – Constants, Variables and Data types.	12	Chalk & Talk	X Manyal
July	п	Operators and Expressions – Decision Making and Branching.	12	Chalk & Talk	A. Mayal
Aug	m	Arrays – Characters Arrays and Strings.	12	Chalk & Talk	A Manyal
Sep	IV	User-defined Functions.	12	Chalk & Talk	A Hayal
Oct	v	Structures and Unions – Pointers.	12	Chalk & Talk	A. Markel

prit.

Signature of the HOD

Signature of the Principal

PRINCIPAL I/C

E.M.G. YADAVA WOMEN'S COLLEGE MADURAI-625 014



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 21SEM51

Title of the Paper: Vector Calculus

Stream: Regular

Total Hours: 30

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Differentiation of vectors – Gradient.	6	Chalk & Talk	P. C.A.
July	п	Divergence and curl – Solved Problems.	6	Chalk & Talk	prif.
Aug	ш	Directional derivative – Solenoidal – Irrotational vectors.	6	Chalk & Talk	prop.
Sep	IV	Line integral – surface integral(without problems)	6	Chalk & Talk	P.C.
Oct	v	Theorems of Green, Gauss and Stoke's theorem (without proof) Simple applications.	6	Chalk & Talk	prel.

prep

Signature of the HOD

Signature of the Principal
PRINCIPAL I/C
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution -Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III - B.SC MATHEMATICS - Regular .

LESSON PLAN 2023-2024

Sub. Code: 22SEM52

Title of the Paper: Quantitative Aptitude

Total Hours: 30

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Aug	1	Problems on Numbers & Problems on Ages	6	Chalk & Talk	Br
Sep	п	Profit and Loss- Ratio and Proportion	6	Chalk & Talk	308
Oct	ш	Time and Work- Time and Distance	6	Chalk & Talk	308m
Nov	IV	Averages - Probability	6	Chalk & Talk	2082
Dec/Jan	v	Permutations and Combinations — Heights & Distance	6	Chalk & Talk	50.B.

Print.

Signature of the HOD

Signature of the Principal

E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014

Williagh



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution -Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

I - B.SC MATHEMATICS

LESSON PLAN 2023-2024

Sub. Code: 23OUMA11

Title of the Paper: Algebra & Trigonometry

Total Hours: 75 Stream: Self-finance

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	1	Reciprocal Equations-Standard form- Increasing or decreasing the roots of a given equation- Removal of terms, Approximate solutions of roots of polynomials by Horner's method- related problems.	15	Chalk & Talk	R.R. Selvany
August	п	Summation of Series: Binomial—Exponential— Logarithmic series (Theorems without proof)— Approximations- related problems.	15	Chalk & Talk	R.P. Sulany
Sep	ш	Characteristic equation – Eigen values and Eigen Vectors-Similar matrices - Cayley – Hamilton Theorem (Statement only) - Finding powers of square matrix, Inverse of a square matrix up to order 3, Diagonalization of square matrices- related problems.	15	Chalk & Talk	R-R-Ruhuy
Oct	IV	Expansions of $sin\theta$, $cosn\theta$ in powers of $sin\theta$, $cos\theta$ -Expansion of $tann\theta$ in terms of tan θ , Expansions of $cos^n\theta$, $sin^n\theta$, $cos^m\theta$ $sin^n\theta$ - Expansions of $tan(\theta_1+\theta_2++\theta_n)$ - Expansions of $sin\theta$, $cos\theta$ and $tan\theta$ in terms of θ - related problems.	15	Chalk & Talk	
Nov	v	Hyperbolic functions – Relation between circular and hyperbolic functions Inverse hyperbolic functions, Logarithm of complex quantities- related problems.	15	Chalk & Talk	

Signature of the HOD

Signature of the Principal PRINCIPAL I C

E.M.G. YADAVA WOMEN'S COLLEGE

MADURAI-625 014

An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

I - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 23OUMA12

Title of the Paper: Differential Calculus

Stream: Self-Finance

Total Hours: 60

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Successive Differentiation: The derivative—Standard results—Fractional expressions—Trigonometrical transformation—Formation of equations involving derivatives—Leibnitz formula for the nth derivative of a product	12	Chalk & Talk	N. Uma Neashe
July	п	Partial Differentiation: Partial derivatives— Successive partial derivatives—Function of a function rule—Total differential coefficient—A special case—Implicit Functions.	12	Chalk & Talk	N. Uma Flor
Aug	ш	Partial Differentiation (Continued): Homogeneous functions—Partial derivatives of a function of two variables — Maxima and Minima of functions of two variables - Lagrange's method of undetermined multipliers			
Sep	IV	Envelope: Method of finding the envelope – Another definition of envelope–	12	Chalk & Talk	N. Una Mar

		Envelope of family of curves which are quadratic in the parameter.			
Oct	v	Curvature: Definition of Curvature - Circle, Radius and Centre of Curvature - Evolutes and Involutes - Radius of Curvature in Polar Co- ordinates.	12	Chalk & Talk	N. mareaben

1.10

Signature of the HOD

Signature of the Principal

E.M.G. YADAVA WOMEN'S COLLEGE MADURAI-625 014

benen

E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution -Affiliated to Madurai Kamaraj University

Re-accredited (3rd Cycle) with Grade A+ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

II - B.Sc., Mathematics - SF LESSON PLAN 2023-2024

Sub. Code: 22OUMA31

Total Hours: 90 Title of the Paper: Modern Algebra

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Groups: Definition and Examples - Elementary properties of groups— Equivalent definitions of a group — Permutation Groups-Subgroups.	18	Chalk & Talk	N. Huma
August	п	Cyclic groups – Order of an Element-Cosets and Lagrange's Theorem-Normal Subgroups and Quotient Groups	18	Chalk & Talk	W. Have
Sep	ш	Isomorphism, Homomorphism – Rings: Definitions and Examples - Elementary properties of rings.	18	Chalk & Talk	M. Hems
Oct	IV	Isomorphism - Types of Rings - Characteristic of a ring -Subrings	18	Chalk & Talk	N. Hema
Nov	v	Ideals-Quotient rings- Maximal and prime ideals	18	Chalk & Talk	N. Hema

Signature of the HOD

E.M.G. YADAVA WOMEN'S COLLEGE

MADURAI-625 014

... the

allalla O



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution -Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

PARTMENT OF MATHEMATICS III - B.SC MATHEMATICS

LESSON PLAN 2023-2024

Sub. Code: 22OUMADSE3A

Title of the Paper: Operations Research

Total Hours: 75 Stream: Self-finance

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Linear programming problem (LPP): Introduction-Mathematical formulation of the Linear Programming problem - Graphical solution method - Some exceptional cases-General linear programming problem-Canonical &standard form of LPP	15	Chalk & Talk	P.R. Inhanys
August	п	LPP Simplex Method: Introduction- Fundamental properties of solutions -The computational procedure - Use of Artificial Variable	13	Chalk & Talk	R.R. Suhunge
Sep	ш	Duality in LPP: Introduction-General primal –Dual pair-Formulating a dual problem-Primal dual pair in matrix form –Duality and simplex method- Dual simplex method(problems only)	15	Chalk & Talk	R.R. Suberry
Oct	IN	Assignment Problem Introduction-LP formulation of the Transportation Problem - Solution of a transportation problem - Finding an initia basic feasible solution - Tes	n i i i i i i i i i i i i i i i i i i i	Chalk & Talk	R. R. Sulemu

Nov	v	Games and strategies: Two- person zero-sum games – Some basic terms – The Maxmini – Minimax Principle - Games without saddle points- Mixed Strategies – Graphic Solution of 2xn and mx2 games – Dominance Property	15	Chalk & Talk	R-R-Arbrewyg
-----	---	--	----	--------------	--------------

Signature of the HOD

E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014

Constant

regions and the english after a principle of section



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

II - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 22OUMASE3

Title of the Paper: Application of Calculus

Stream: Self-finance

Total Hours: 75

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Maxima and Minima-Concavity and convexity, Point of inflexion-indetermined forms.	6	Chalk & Talk	Shy
Aug	п	Tangent and Normal – Angle of intersection of curves-singular points	6	Chalk & Talk	Alyi
Sep	ш	Linear Asymptotes- Asymptotes parallel to the axes- Another method for find asymptotes-asymptotes by inspection intersection of a curve with its asymptotes.	6	Chalk & Talk	dyi
Oct	IV	Tracing a curves- Cartesian equation and polar equation(except well known curves)	6	Chalk & Talk	Alyi
Nov	v	Area of plane region and length of a plane curve	6	Chalk & Talk	Olji

P. N. P.

Signature of the HOD

Signature of the Principal
PRINCIPAL I/C
EM.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014

Min.



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution -Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

DEPARTMENT OF MATHEMATICS III - B.SC MATHEMATICS LESSON PLAN

2023-2024

Sub. Code : 21M51

Title of the Paper: Modern Analysis

Total Hours: 75 Stream: Self-finance

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	1	Countable Sets - Uncountable Sets - Inequalities of Holder and Minkowski - Metric Spaces - Definitions and - Open Ball in a Metric Dense Sets - Complete Metric Spaces Completeness - Baire's Category Theorem.	15	Chalk & Talk	R.R. Suhenye
August	п	Continuity – Continuity – Homeomorphism – Uniform Continuity Countable Sets – Uncountable Sets – Inequalities of Holder and Minkowski - Open Ball in a Metric Space – Open Sets – Subspace - Interior of a set	15	Chalk & Talk	R.R. Shunga
Sep	ш	CompleteMetricSpaces- Completeness - Baire's Category Theorem.	15	Chalk & Talk	R.R. Subamye
Oct	IV	Connectedness - Definition and Examples - Connected Subsets of R - Connectedness and Continuity	15	Chalk & Talk	R.R. Shange
Nov	v	Connectedness - Definition and Examples - Connected Subsets of R - Connectedness and Continuity	15	Chalk & Talk	R.R. Sibornya

Signature of the HOD

Signature of the Principal PRINCIPAL I/C EM.G. YADAVA WOMEN'S COLLEGE MADURAI-625 014

Music ...



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 21M52

Title of the Paper: Statistics -I

Stream:Self-Finance

Total Hours: 75

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Moments, Skewness and Kurtosis: Moments – Skewness and Kurtosis – Curve Fitting – Principle of least squares	15	Chalk & Talk	p.r.o
August	п	Correlation and Regression: Correlation – Rank Correlation – Regression – Correlation Co- Efficient for a Bivariate Frequency Distribution.	15	Chalk & Talk	12.10
Sep	ш	Theory of Attributes: Attributes- Consistency of data – Independence and Association of data.	15	Chalk & Talk	12.1.50
Oct	IV	Index Number: Index Numbers – Consumer Price Index Number (cost of living index numbers).	15	Chalk & Talk	p. 15.
Nov	V	Probability: Probability – Conditional Probability.	15	Chalk & Talk	priso

P. M. P.

Signature of the HOD

ADIGNATURE OF the Principal
PRINCIPAL IZE

EM.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014

Witness

E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution – Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 21M53

Title of the Paper: Dynamics

Stream-Self Finance

Total Hours: 60

Mont h	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July		. Definitions – Two fundamental	lo-terhoat	a waste.	
		principles - Path of a Projectile is a		War or well	
		parabola - Characteristics of the	getted - s	en en ind	
		motion of a projectile - To	est los m	2 h-1817 L503	a al
		determine when the horizontal	on a family	an est profil	4-10
		range of a projectile is maximum,	ark with miles	nation for a	
		given the magnitude u of the	12	Chalk &	
	I	velocity of projection - To show	amili vesi andi	Talk	
		that, for a given initial velocity of	an s è novi	Jakobski	
		projection there are, in general to	lajour Toca	be for editio	
		possible directions of projections	r roviga r	A bath years	
		so as to obtain a given horizontal	t marganis	D /falls	
			to of 'Bagor	perceal, so	
			e de la companya de l	contraction .	

			A (2.1.26)	great F	and the same
		magnitude to the velocity acquire in falling freely from the directrix to the point – Given the magnitude of	miles c	k Philip Swin	
		the velocity of projection, to show	ACT 126		1000
		that there are two direction of			
		projection for the particle so as to	S. In C.	Constant	
		reach a given point – Range on an inclined plane – To find, The	* S () ()	100	
	n	greatest distance of the projectile		1 2 A 12	
		from the inclined plane and show	12	Chalk & Talk	\
		that is attained in the half the total			a har
		time of flight – To determine when	N Anna	7 Distribute	Ky
		the range on the inclined plane is		or and desired	
		maximum, given the magnitude u	les de la company	WILL STOLEN	
		of the velocity of projection – To		50 YS1 YS8	
		show that, For a given initial		Partition of	
		velocity of projection, there are, in		of Adding Man	
		general, two possible directions of			
		projection so as to obtain a given		14 x 1 3 2 4 1	
		range on an inclined plane –	m-5 -2		
		Motion on the surface of a smooth			
		inclined plane.(with examples)			4/1/2
		- Cramples)		1	
Sep		Collision of Elastic Bodies –			
	Ш	Definitions - Fundamental laws of	12	Chalk &	
		impact – Impact on the smooth		Talk	

Sphere Direct 1

		sphere on a fixed smooth plane – Direct impact of two smooth spheres – Laws of kinetic energy due to direct impact of two smooth spheres – Oblique impact of two smooth spheres – Laws of kinetic energy due to oblique impact of two smooth sphere.(with examples)			2.4
Oct	īV	Simple Harmonic Motions – Simple Harmonic Motion in a Straight line – General solution of S.H.M Equation – Geometrical Representation of a Simple Harmonic Motion – Change of origin - Composition of two Simple Harmonic Motion of the same period and in same straight line – Composition of two Simple Harmonic Motion of the same period in two perpendicular directions.(with examples)	12	Chalk & Talk	R. M
Nov	v	Motion Under The Action Of Central Forces – Velocity and Acceleration in Polar Co-ordinates – Equation of Motion in Polar Coordinates – Note on the equiangular spiral – Differential Equation of central orbits – Perpendicular from the pole on the tangent formulae in polar coordinates – Pedal equation of the central orbit. (with examples)	12	Chalk & Talk	P.M.

P. A. .
Signature of the HOD

PRINCIPAL I/C
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014

0



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

'ARTMENT OF MATHEMATIC III - B.Sc., Mathematics

LESSON PLAN 2023-2024

Sub. Code: 21ME5A

Title of the Paper: Linear Algebra

Stream: Self-Finance

Total Hours: 60

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Vector Spaces: Definition and Examples – Subspaces – Linear Transformations.	12	Chalk & Talk	12.00
July	п	Vector Spaces: Span of a set - Linear Independence - Basis and Dimension - Rank and Nullity - Matrix of a Linear Transformation.	12	Chalk & Talk	puil.
Aug	ш	Inner Product Space: Definition and Examples – Orthogonality – Orthogonal Complement.	12	Chalk & Talk	prie.
Sep	IV	Theory of Matrices: Algebra of Matrices – Types of Matrices – The Inverse of Matrix.	12	Chalk & Talk	R-R-holuge
Oct	v	Theory of Matrices: Elementary Transformations - Ranks of a Matrix - Simultaneous Linear Equations - Characteristic Equation and Cayley Hamilton Theorem - Eigen Values and Eigen Vectors.	12	Chalk & Talk	erhuy

P.Mit.

Signature of the HOD

Signature of the Principal PRINCIPAL IZE

11.,

E.M.G. YADAVA WOMEN'S COLLEGE MADURAI-625 014

9



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

DEPARTMENT OF MATHEMATICS

III - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 21AA51

Title of the Paper: Programming in C

Stream: Self-Finance

Total Hours: 60

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Overview of C - Constants, Variables and Data types.	12	Chalk & Talk	A Mayala
July	п	Operators and Expressions – Decision Making and Branching.	12	Chalk & Talk	A. Magala
Aug	ш	Arrays – Characters Arrays and Strings.	12	Chalk & Talk	A Mangalo
Sep	IV	User-defined Functions.	12	Chalk & Talk	A mayala
Oct	v	Structures and Unions – Pointers.	12	Chalk & Talk	A Mayal

P. Ame

Signature of the HOD

Signature of the Principal

PRINCIPAL I/C

E.M.G. YADAVA WOMEN'S COLLEGE

MADURAI-625 014



An Autonomous Institution –Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC DEPARTMENT OF MATHEMATICS

III - B.Sc., Mathematics LESSON PLAN 2023-2024

Sub. Code: 21SEM51

Title of the Paper: Vector Calculus

Stream: Self-Finance

Total Hours: 30

Month	Unit	- secreption of the Synanus	Hours Allocated	Teaching Mode & Methods	Course Teacher
June	I	Differentiation of vectors – Gradient.	6	Chalk & Talk	Signature N. Uma Hal
July	п	Divergence and curl – Solved Problems.	6	Chalk & Talk	N. Uma orali
Aug	m	Directional derivative – Solenoidal – Irrotational vectors.	6	Chalk & Talk	N. Uma Neel
Sep	IV	Line integral – surface integral(without problems)	6	Chalk & Talk	N. Uma Keal
Oct	v	Theorems of Green, Gauss and Stoke's theorem (without proof) Simple applications.	6	Chalk & Talk	N-Uma Nee

Signature of the HOD

PRINCIPAL I/C
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE An Autonomous Institution -Affiliated to Madurai Kamaraj University Re-accredited (3rd Cycle) with Grade A+ and CGPA 3.51 by NAAC

DEPARTMENT OF MATHEMATICS III - B.SC MATHEMATICS (S.F) LESSON PLAN

LESSON PLAN 2023-2024

Sub. Code: 22SEM52

Title of the Paper: Quantitative Aptitude

Total Hours: 30

Month	Unit	Description Of The Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Aug	1	Problems on Numbers & Problems on Ages	6	Chalk & Talk	208
Sep	п	Profit and Loss- Ratio and Proportion	6	Chalk & Talk	08
Oct	ш	Time and Work- Time and Distance	6	Chalk & Talk	المرر الكي
Nov	IV	Averages - Probability	6	Chalk & Talk	200
Dec/Jan	v	Permutations and Combinations – Heights & Distance	6	Chalk & Talk	S. J.

Signature of the HOD

Signature of the Principal
PRINCIPAL I/C
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625 014